Can Standing Long Jump Distance be Predicted from Between-the-Legs Front Throw Distance?

[1]Flott, A., [1]Slonaker, K., [1]Spratford, K., [1]Meyer, B. [1]Shippensburg University, Shippensburg, PA

af2509@ship.edu, ks2478@ship.edu, ks5548@ship.edu, bwmeyer@ship.edu

Purpose: The standing long jump (SLJ) and between-the-legs front throw (BLF) are commonly used in physical fitness assessments. Due to the similarity between the SLJ and BLF techniques, we hypothesize that a strong relationship exists between measured distances in the two activities. The purpose of this study is to assess the strength of the relationship between measured distances in SLJ and BLF activities. Methods: Seven male and eighteen female undergraduate students participated in the study. Participants performed three SLJ and three BLF trials, with the goal of achieving maximum distance. Males threw a 7.26 kg indoor shot, and females threw a 4.0 kg indoor shot for the BLF trials. For each participant, the best performance (based on largest measured distance) was used for further analysis. In order to determine the extent of the relationship between the two measures, the Pearson product moment correlation coefficient "r" was computed. Results: For males, SLJ distances ranged from 1.90 m to 2.60 m, while BLF distances ranged from 6.5 m to 10.3 m. For females, SLJ distances ranged from 1.45 m to 2.20 m, and BLF distances ranged from 5.0 m to 11.2 m. The coefficient of determination between SLJ distance and BLF distance was $R^2 = 0.49$ for males and $R^2 = 0.35$ for females. Moderately strong correlations were found between the measures in the study; for males, Pearson's r = 0.70 and for females Pearson's r = 0.59. Conclusion: Due to the moderately strong relationship between the SLJ and BLF measures, the authors recommend that if practitioners do not have enough time to perform both SLJ and BLF activities during a testing session, using either technique should provide a good measure of athletic power.